

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Drawings

Applicant respectfully requests that the Examiner accept the formal drawings submitted on February 27, 2004.

Disposition of Claims

Claims 1-11 were pending in this application. By way of this reply, claims 1 – 11 have been amended, and new claim 12 has been added. Thus, claims 1-12 are currently pending. Claims 1, 2, 3, and 11 are independent. The remaining claims depend, directly or indirectly, from claims 1, 2, 3, or 11.

Claim Amendments

Independent claim 1 has been amended to clarify that the reference point is selected from a portion of the first reflection face that dominates a light intensity from the first reflection face. No new matter has been added by way of this amendment as support for this amendment may be found, for example, in paragraph [0083] of the published application (Pub. No. 20040189897).

Independent claims 2-3 and 11 have been amended for clarification purposes. In particular, the statistical analysis of the frequency distribution is clarified. No new subject

matter has been added by way of these amendments, as support for these amendments may be found, for example, in Figures 3A, 3B, 4, and 5, and the associated text of the application.

Claims 1-11 have been additionally amended to correct grammatical errors and for clarification purposes. No new matter has been added by way of these amendments.

New claim 12 has been added to recite a feature disclosed in, e.g., Fig. 12A and the associated text of the application. No new matter has been added by way of this amendment.

Rejection(s) under 35 U.S.C. § 112

Claims 1 – 11 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In particular, the Examiner asserts that the “coherent length” is not apparent. For the following reasons, this rejection is respectfully traversed.

An applicant is entitled to be his or her own lexicographer. See *In re Paulsen*, 30 F.3d 1475, 148, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). The term “coherent length” has been clearly defined in paragraph [0040] of the published application, *i.e.*, “coherent length L_c is a value provided by dividing the coherent length within the air by the refractive index of a medium transmitting light therethrough.” The concept of the “coherent length within the air” is, in turn, known to a person of ordinary skill in the art. The disclosure has further provided an example of a coherent length of the sunlight within the air to be 3 μm .

As a side note, Applicant respectfully notes that a definition of a coherent length used by the Examiner in the instant Office Action appears to be from Wikipedia, which is not an acceptable source of information for USPTO practices.

In view of the above, claims 1 – 11 are definite as being fully supported by the disclosure of the present application. Accordingly, withdrawal of the rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 102

Claims 1 – 4 and 6 – 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,285,425 in the name of Akins *et al.* (hereinafter “Akins”). Independent claims 1-3 and 11 have been amended as explained above. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

The present invention is directed to a reflector used in a display device such as a liquid crystal display. Referring to, *e.g.*, FIG. 3A, reproduced below, and paragraph [0036] of the published application, a reflector (1) has a first unit reflecting portion (A1) and an adjacent second unit reflecting portion (A2). A first tangential plane (7) is defined as a plane tangent to the first reflecting face at a selected reference point (6). A second tangential plane (8) is defined by a plane tangent to the second reflection surface and parallel to the first tangential plane. The distance between the two tangential planes, which by definition is a shortest distance between the reference point and the second tangential plane, is dP.

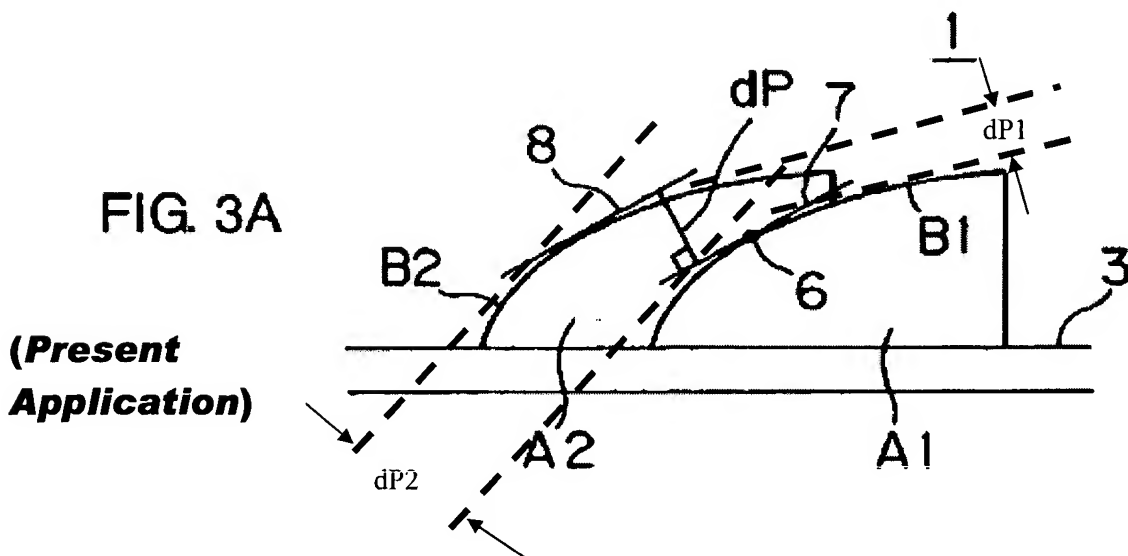
Referring further to, *e.g.*, paragraph [0083] of the published application, the reference point is selected near a point most dominant in the intensity of the reflection light on each reflection face, such that a statistical frequency distribution of dP among all the reflection portions, as shown in FIGS. 4 and 5, satisfies that a majority of the dP's have a value $\geq Lc/2$. Because most of the light reflected by the reflector satisfies this requirement, advantageously, the mixture of the interference light is greatly reduced.

Accordingly, amended independent claim 1 requires, in part, that a shortest distance between a reference point and the second tangential plane is half or more of a coherent length of the incident light, wherein the reference point is selected from a portion of the first reflecting surface that *dominates a light intensity* from the first reflecting surface. These limitations inherently require that, for a number of reference points selected from a significant portion of the reflection face, the requirement $dP \geq Lc/2$ will be satisfied.

Thus, the above-mentioned limitations of claim 1 are consistent with the limitations of claim 2, wherein it is required that an *average* of distances $\geq Lc/2$.

Similarly, the above-mentioned limitations are consistent with the limitations of independent claims 3 and 11. As a person of ordinary skill in the art would perform a statistical analysis, similar to those of FIGS. 4 and 5, of the reflection portions of the reflector of the invention, one would find that the distance corresponding to the maximum frequency $\geq Lc/2$.

As illustrated in the following FIG. 3A, in addition to the reference point (6) that defines dP , many other reference points exist in a significant portion of the reflection surface, and their respectively-defined distances, such as $dP1$ and $dP2$, are also $\geq Lc/2$.

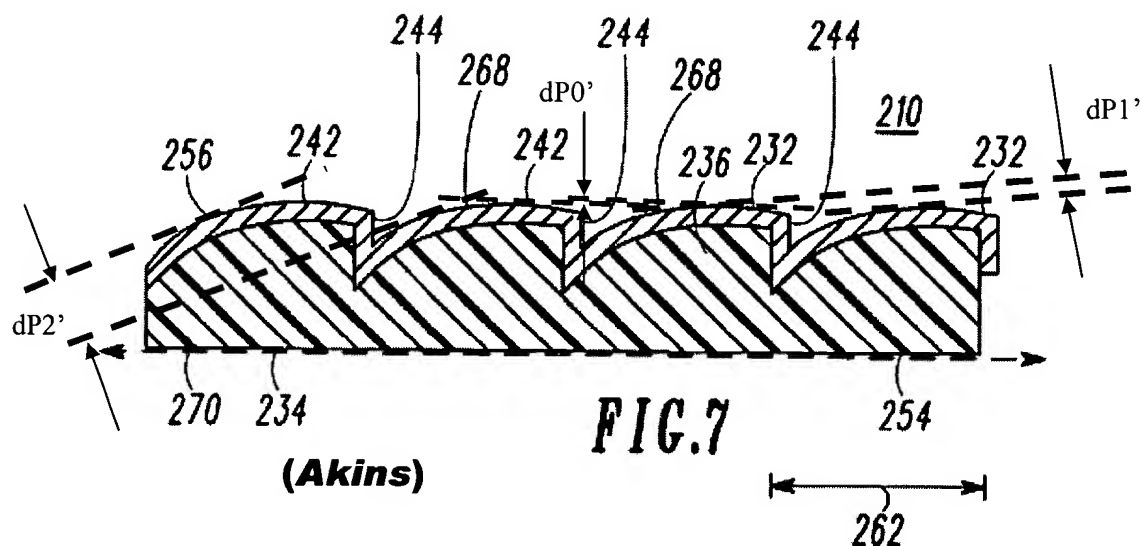


In contrast, Akins fails to show or suggest at least the above-mentioned limitations. The Examiner has relied upon Fig. 7 of Akins, reproduced below, to supply the purported limitations. Applicant respectfully disagrees.

First of all, the Examiner has used the “pitch” as a measure of distances between two planes. As clearly shown in Fig. 7, and as known to a person of ordinary skill in the art, the pitch is defined by two *vertical* planes, not *tangential* planes.

Second, for *most part* of the reflecting surface in Fig. 7, the distance between two parallel tangential planes would be close to zero, and are definitely $< Lc/2$. See, $dP0'$ and $dP1'$ for examples. Even if one were to chose a reference point at an *extreme location*, *e.g.*, near the left edge of a reflection portion, and the distance $dP2'$ is significantly non-zero, there is nothing in Akins showing or suggesting that $dP2' \geq Lc/2$.

Further, assuming *arguendo* that it is possible to find such a reference point that $dP2' \geq Lc/2$, such a reference point can only possibly be located at near-edge, *non-dominant* portion of a reflection surface. A statistical analysis of the reflector as disclosed by Akins would show that, unlike those of the present invention as illustrated in FIGS. 4 and 5 of the present application, *only a small fraction* of the reflection portions can possibly have $dP \geq Lc/2$, and such a small, *non-significant* fraction cannot possibly dominate the reflected light intensity. Accordingly, the reflector of Akins will have the problem of mixture of the interference light.



In view of the above, Akins fails to show or suggest the present invention as recited in amended independent claims 1-3 and 11. Thus, amended independent claims 1-3 and 11 are patentable over Akins. Claims 4 and 6-10, directly or indirectly dependent from claims 1-3 and 11, are allowable for at least the same reasons set forth above. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 103

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being obvious over Akins. Independent claim 3 has been amended as explained above. To the extent that this rejection may still apply to dependent claim 5, the rejection is respectfully traversed.

As discussed above, Akins does not show or suggest all the limitations of amended independent claim 3. Thus, amended independent claim 3 is patentable over Akins. Claim 5, directly dependent from claim 3, is allowable for at least the same reasons set forth above. Accordingly, withdrawal of this rejection is respectfully requested.

Patentability of New Claim

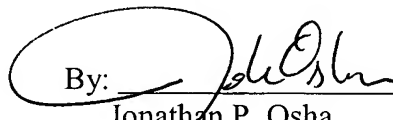
As discussed above, amended independent claim 1 is patentable over Akins. New claim 12, directly dependent from claim 1, is allowable for at least the same reasons set forth above.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 15115/107001).

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Respectfully submitted,

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